

No.

200400013



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME;

University of Arkansas Agricultural Experiment Station

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR IN PRODUCING A VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED, AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED BY U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'AR 839'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this first day of July, in the year two thousand and four.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture


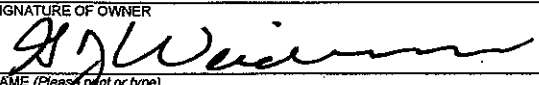


U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER University of Arkansas Agricultural Experiment Station		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME AR 839-25-8-2		3. VARIETY NAME AR 839	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) Agricultural, Food and Life Sciences Building, Room 219 Fayetteville, AR 72701		5. TELEPHONE (include area code) (479) 575-4750		FOR OFFICIAL USE ONLY PVPO NUMBER 2004 000 13 FILING DATE October 20, 2003	
		6. FAX (include area code) (479) 575-2410			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.)		8. IF INCORPORATED, GIVE STATE OF INCORPORATION		9. DATE OF INCORPORATION	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Robert Bacon Department of Crop, Soil, and Environmental Sciences 115 Plant Science Building University of Arkansas Fayetteville, AR 72701				FILING AND EXAMINATION FEES: \$ 3652.00 DATE 10/20/2003 CERTIFICATION FEE: \$ 432.00 DATE 6/14/2004	
11. TELEPHONE (Include area code) (479) 575-5725		12. FAX (Include area code) (479) 575-7465		13. E-MAIL rbacon@uark.edu	
14. CROP KIND (Common Name) Wheat, common		16. FAMILY NAME (Botanical) Gramineae		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP Triticum aestivum		17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)				20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input checked="" type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input type="checkbox"/> NO (If "no", go to item 23)	
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)				21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input checked="" type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)				22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input checked="" type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)					
25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF OWNER 		SIGNATURE OF OWNER 			
NAME (Please print or type) Greg Weidemann		NAME (Please print or type) Greg Weidemann			
CAPACITY OR TITLE Dean & Assoc. V-P for Research		DATE 10/13/03		CAPACITY OR TITLE Dean & Assoc. V-P for	
				DATE 10/13/03	

(See reverse for instructions and information collection burden statement)

INSTRUCTIONS

2004 000 13

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/lsg/seed.htm>.

ITEM

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

22. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

23. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

Date of first sale (USA) - October 20, 2002

24. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotope, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

18a. Exhibit A: Origin and Breeding History of the Variety

Pedigree: Terral 101/Pioneer 2548

AR 839 was derived from a F_1 population received from Dr. Stephen Harrison at Louisiana State University in a germplasm exchange program in 1991. The cross of Terral 101/Pioneer 2548 was made in 1990. AR 839 originated from an F_5 selection. The population was grown as a bulk in the F_2 and F_3 generations at Stuttgart, Arkansas to allow natural selection for adaptation, particularly for wet soil conditions. Single head selections were made in the F_4 and the F_5 generations based on plant height, maturity date, plant type and disease reaction. Disease reaction was based primarily on leaf rust (caused by *Puccinia triticina* Eriks.) and Septoria leaf blotch (caused by *Septoria tritici* Roberge in Desmaz.) The resulting experimental line was designated as AR 839-25-8-2. During the F_6 generation it was selected for resistance to a complex of soilborne wheat mosaic (SBWMV) and wheat spindle streak mosaic (WSSMV). During subsequent generations it was selected based primarily on test weight and grain yield under Arkansas conditions.

AR 839 was tested in the Arkansas Small-Grain Cultivar Performance Trials in 2000, 2001 and 2002 and in the USDA-ARS Uniform Southern and Uniform Eastern Soft Red Winter Wheat regional trials in 2001. AR 839 has appeared stable and uniform for seven generations. Variants may include awnless plants ($\leq 0.1\%$) or tall plants ($\leq 0.5\%$).

18b. Exhibit B: Statement of Distinctness

AR 839 is most similar to 'Pat' in appearance. Both have a plant color of 147A in the yellow-green group (as referenced by the Royal Horticultural Society Color Chart). AR 839 is 2 to 3 days earlier than Pat in Arkansas. The difference is summarized in Table 1 which gives a three year average across all tests in the Arkansas Variety Test. Statistics are not available for these data, so also included is Table 2 with data from the 2002-2003 Arkansas Small-Grain Cultivar Performance Tests. This table represents the data from 5 tests that meet the requirement for pooling. The test was for the homogeneity of variances in the experiments (MSE for the variable maturity date). The ratio of the largest variance from the five tests and the smallest variance from the five tests was 1.76, indicating the variances were homogeneous (less than 3 is considered acceptable). At maturity, AR 839 has spikes which are awned, mid-dense, fusiform and nodding at maturity. The white glumes are glabrous, midlong and midwide with narrow, oblique shoulders and medium, acute beaks. Kernels are red, short to midlong and ovate, with a small germ; the kernel brush is midsized and midlong; the kernel crease is narrow in width and is mid-deep with rounded cheeks. Kernels on average are 6.1 mm long and 2.9 mm wide with a kernel weight of 28 mg.

Exhibit B.

Table 1. Three-year (2001-2003) average performance across all tests (23) in Arkansas.

Entry Name	Yield	Test wt	Lodg	Pt ht	Head date	Mat. date	Leaf rust	Stripe rust
	bu/A	lb/bu	%	in			%	%
DIXIE 900	76.6	55.1	2	38	4-19	5-22	0	0
DELTA KING 7777	76.3	54.8	8	38	4-20	5-22	30	0
DELTA KING 7900	75.6	54.5	3	38	4-19	5-21	3	0
AGS 2000	74.6	54.9	8	35	4-17	5-21	0	9
ARMOR 3035	74.3	54.3	4	37	4-20	5-22	1	1
CROPLAN GENET. 554W	74.2	54.2	11	33	4-19	5-20	1	24
AGRIPRO SHELBY	74.1	55.8	16	36	4-19	5-21	4	19
AR 839	74.0	55.2	3	35	4-21	5-23	2	0
DELTA GROW 4888	73.9	54.3	5	38	4-19	5-22	2	0
PAT	73.7	55.6	1	37	4-23	5-25	2	0
AGRIPRO NATCHEZ	73.6	53.3	17	37	4-21	5-22	0	0
DELTA KING 9216	73.4	53.2	9	37	4-21	5-22	2	3
DELTA KING 155W	72.7	54.2	4	34	4-20	5-22	4	0
PIONEER BRAND 26R24	72.7	53.8	13	35	4-18	5-20	1	14
DIXIE 922	72.5	54.3	6	38	4-20	5-21	1	1
SABBE	72.2	53.9	3	35	4-21	5-24	12	1
VIGORO TRIBUTE	72.0	56.1	12	32	4-20	5-23	5	5
USG 3209	71.8	54.3	9	31	4-18	5-20	0	7
PIONEER BRAND 26R46	71.7	54.6	3	34	4-18	5-20	1	3
LA 90185G3-1-3-4-2	71.5	53.4	15	35	4-18	5-23	2	38
PIONEER BRAND 26R38	71.5	54.0	5	36	4-18	5-20	6	29
ARMOR 4045	70.8	54.0	6	38	4-20	5-22	4	1
SOUTH. STATES SS 535	70.7	55.9	8	32	4-20	5-21	2	14
PROGENY 156	70.4	53.3	7	36	4-21	5-22	1	1
NK COKER 9663	70.3	55.7	16	37	4-19	5-22	2	10
DELTA GROW 5300	70.2	53.2	14	35	4-20	5-20	3	0
NK COKER 9152	70.2	54.2	13	37	4-18	5-20	0	7
TERRAL TV 8555	70.1	54.0	2	32	4-21	5-22	0	1
SOUTH. STATES SS 522	70.0	55.2	6	34	4-19	5-21	0	17
HBK 3030	69.9	54.1	3	32	4-18	5-21	1	4
USG 3709	69.6	52.4	3	36	4-19	5-22	30	14
ROANE	69.0	55.9	10	32	4-21	5-23	0	3
FFR 510	68.7	53.6	14	35	4-16	5-18	1	63
TERRAL LA841	68.3	53.5	9	33	4-18	5-19	0	0
DELTA KING 9027	68.3	52.4	13	35	4-20	5-22	1	0
DELTA KING 9121	66.2	53.0	8	33	4-20	5-23	0	5
Grand mean	71.9	54.3	8	35	4-19	5-22	3	
LSD (5%)	3.4	0.8						
C.V. (%)	10.3	3.2						

Lodg = Lodging Pt ht = Plant height

Exhibit B.

Table 2. Pooled data from 5 experiments in 2003 meeting the assumption for homogeneity of variances.

Entry Name	Yield	Test wt	Ldg	Pt ht	Head date	Mat. date	Wint kill	Leaf rust	Dis # 2
	bu/A	lb/bu	%	in			%	%	%
CROPLAN GENET. 554W	83.8	53.9	2	33	4-19	5-18			45
AGRIPRO BERETTA	83.2	54.3	1	33	4-21	5-21			0
FFR 556	82.2	54.4	1	33	4-20	5-17			18
NK COKER 9375	82.0	52.8	1	37	4-20	5-19			0
DELTA KING 9410	80.9	53.8	2	38	4-21	5-20			0
AXR 5888	80.7	54.7	1	38	4-20	5-19			0
SABBE	80.5	54.2	0	36	4-21	5-22			0
USG 3350	80.5	54.5	1	38	4-20	5-20			0
GENESIS R024	80.4	53.8	0	35	4-21	5-20			0
TERRAL TV8466	80.4	53.9	0	35	4-21	5-20			0
DIXIE 900	80.2	54.4	1	39	4-20	5-20			0
DELTA KING 7777	80.2	54.0	1	38	4-20	5-21			0
DELTA GROW 4500	80.2	54.1	2	38	4-19	5-19			0
GENESIS R023	79.7	54.4	0	39	4-19	5-19			0
GENESIS R033	79.5	54.5	1	38	4-21	5-20			0
AGRIPRO D98*9762	79.3	54.9	1	35	4-17	5-19			17
COYOTE	79.3	54.4	0	34	4-18	5-19			0
TERRAL TV8450	79.1	54.2	1	38	4-19	5-19			0
TERRAL TVX81H04	79.1	54.4	1	38	4-19	5-18			0
DELTA KING 9216	79.1	53.2	2	37	4-21	5-20			0
AXR 5111	79.0	54.8	1	38	4-19	5-19			0
AGS 2000	79.0	54.9	4	35	4-17	5-19			2
SOUTH. STATES SS524	79.0	52.5	1	33	4-16	5-19			10
DELTA KING 9121	78.8	53.6	1	33	4-20	5-21			2
RENWOOD 3706	78.8	54.9	0	31	4-18	5-16			0
GENESIS M86	78.6	54.1	0	39	4-20	5-21			0
AGRIPRO SAVAGE	78.5	55.7	3	33	4-19	5-17			1
TERRAL TV8502	78.5	55.0	1	38	4-20	5-20			0
USG 3209	78.4	54.3	9	30	4-17	5-16			4
ROANE	78.4	55.5	3	32	4-21	5-21			3
TERRAL TVX82H01	78.1	54.2	1	38	4-19	5-19			0
DELTA GROW 4888	78.0	54.0	1	38	4-20	5-20			0
DELTA KING 9027	78.0	53.5	3	36	4-21	5-21			0
SOUTH. STATES SS560	77.9	53.4	0	33	4-19	5-17			10
NK COKER 9152	77.9	54.3	2	38	4-17	5-18			13
LA 90185G3-1-3-4-2	77.8	54.8	7	36	4-19	5-21			5
DELTA KING 7900	77.7	54.4	1	39	4-20	5-20			0
DIXIE 9512	77.5	54.0	1	38	4-19	5-19			0
McCORMICK	77.5	54.5	3	30	4-21	5-19			0
DELTA KING 1551	77.5	53.6	1	34	4-19	5-20			0
DELTA GROW 4200	77.5	54.1	3	38	4-20	5-19			0
AGRIPRO SHELBY	77.5	55.2	5	36	4-20	5-19			4
ARMOR X5777	77.3	54.7	1	38	4-20	5-19			0
PROGENY 166	77.2	54.4	0	38	4-20	5-20			0
SOUTH. STATES SS 522	77.1	54.3	0	35	4-20	5-19			1
GENESIS R043	77.0	54.3	1	39	4-20	5-19			0
NK COKER 9663	77.0	54.2	9	38	4-19	5-20			5
PROGENY 156	76.9	53.7	1	37	4-21	5-20			0
USG 3430	76.9	54.6	1	38	4-19	5-19			0
AR 910-9-1	76.7	53.8	2	37	4-19	5-19			0
DELTA GROW 5300	76.7	53.1	2	36	4-19	5-18			0
AGRIPRO M98-1661	76.7	53.3	1	33	4-22	5-22			0
DIXIE 9812	76.7	54.4	1	38	4-19	5-19			0
AGRIPRO NATCHEZ	76.6	53.6	5	38	4-21	5-20			0
TERRAL LA841	76.0	54.2	3	33	4-17	5-17			0
TERRAL TV8565	76.0	53.0	1	39	4-20	5-20			0
ARMOR X5222	76.0	54.1	1	38	4-21	5-20			0
HBK 3106	75.9	55.0	0	38	4-17	5-19			8

Exhibit B.

AR 839	75.9	54.1	0	37	4-21	5-20	0
ARMOR 3035	75.8	53.6	1	38	4-20	5-20	0
PIONEER 26R58	75.6	53.9	0	33	4-20	5-18	3
USG 3592	75.5	54.4	6	36	4-19	5-17	0
EK EXP180	75.5	55.0	0	35	4-23	5-22	0
TERRAL TV 8555	75.5	53.8	0	32	4-21	5-20	0
DIXIE X9113	75.4	55.0	0	35	4-22	5-23	0
AGS 2485	75.4	54.6	0	36	4-18	5-19	55
PROGENY 145	75.3	54.0	1	38	4-19	5-19	0
EK EXP138	75.1	54.5	1	38	4-19	5-19	0
PAT	75.0	54.3	0	38	4-23	5-23	0
PIONEER BRAND 26R38	75.0	54.4	1	36	4-19	5-18	13
DIXIE 933	74.9	54.8	1	40	4-21	5-19	0
VIGORO TRIBUTE	74.7	55.1	0	32	4-19	5-21	2
DIXIE 922	74.7	54.0	1	39	4-20	5-20	0
ARMOR X5333	74.7	52.9	0	38	4-20	5-19	0
DIXIE X9013	74.5	53.8	1	37	4-21	5-21	0
PIONEER 26R12	74.5	54.8	0	34	4-20	5-19	1
DIXIE X9712	74.4	53.8	1	38	4-20	5-19	0
ARMOR 4045	74.0	53.7	0	39	4-21	5-21	0
PIONEER BRAND 26R24	73.8	53.7	2	35	4-18	5-17	4
AR 839-28-1-2	73.4	53.6	0	36	4-20	5-20	0
PROGENY 110	73.1	54.4	1	37	4-20	5-19	0
SOUTH. STATES SS520	72.9	53.8	1	35	4-15	5-16	91
CROPLAN GENET. 514W	72.8	54.0	8	35	4-15	5-16	91
SOUTH. STATES SS 535	72.8	54.9	1	32	4-20	5-19	1
FFR 510	72.7	54.2	7	36	4-15	5-15	83
USG 3709	72.2	52.7	3	36	4-19	5-20	4
HBK 3030	72.2	53.8	0	32	4-19	5-19	0
NC96-13156	71.1	54.6	2	33	4-22	5-20	9
GENESIS VENTURE	70.9	53.8	1	35	4-19	5-19	14
PIONEER BRAND 26R46	70.2	53.2	1	34	4-18	5-18	0
Grand mean	77.0	54.2	2	36	4-20	5-19	6
LSD (5%)	6.6	1.5		1	1	1	
C.V. (%)	11.8	3.7		4	3	2	

Randomized complete block design: 4 replications.

REPRODUCE LOCALLY. Include form number and date on all reproductions.

Form Approved - OMB No. 0581-0055

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**U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705**

**OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)**

NAME OF APPLICANT(S) University of Arkansas Agricultural Experiment Station	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or RD No., City, State, and Zip Code) Agricultural, Food and Life Science Building, Room 219 Fayetteville, AR 72701	PVPO NUMBER 200400013
	VARIETY NAME AR 839
	TEMPORARY OR EXPERIMENTAL DESIGNATION AR 839-25-8-2

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. or) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____

Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

- 1=Common
2=Durum
3=Club
4=Other (SPECIFY) : _____

2. VERNALIZATION:

- 1=Spring
2=Winter
3=Other (SPECIFY) : _____

3. COLEOPTILE ANTHOCYANIN:

- 1 = Absent 2 = Present

4. JUVENILE PLANT GROWTH:

- 1 = Prostrate 2 = Semi-erect 3 = Erect

5. PLANT COLOR (boot stage):

- 1 = Yellow-Green
2 = Green
3 = Blue-Green

6. FLAG LEAF (boot stage):

- 1 = Erect
2 = Recurved
- 1 = Not Twisted
2 = Twisted
- 1 = Wax Absent
2 = Wax Present

7. EAR EMERGENCE:

- Number of Days (Average)
- Number of Days Earlier Than _____ Pat _____ *
- Same as Roane _____ *
- Number of Days Later Than Terral LA841 _____ *

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

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8. ANTHOR COLOR:

☐ 1 = Yellow
☐ 2 = Purple

9. PLANT HEIGHT (from soil to top of head, excluding awns):

☐ ☐ 8 ☐ 9 cm (Average)

☐ 0 ☐ 8 cm Taller Than Roane *

Same as Pioneer Brand 26R24 *

☐ 0 ☐ 5 cm Shorter Than Pat *

10. STEM:

A. ANTHOCYANIN

☐ 1 = Absent
☐ 2 = Present

B. WAXY BLOOM

☐ 1 = Absent
☐ 2 = Present

C. HAIRINESS

(last internode of rachis)

☐ 1 = Absent
☐ 2 = Present

D. INTERNODE

☐ 1 = Hollow 2 = Semi-solid 3 = Solid

☐ 4 Number of Nodes

E. PEDUNCLE

☐ 2 1 = Erect 2 = Recurved 3 = Semi-erect

☐ 3 ☐ 0 cm Length

F. AURICLE

☐ 1 Anthocyanin 1 = Absent 2 = Present

☐ 1 Hair 1 = Absent 2 = Present

11. HEAD (at Maturity):

A. DENSITY

☐ 2 1 = Lax
 2 = Middense (Laxidense)
 3 = Dense

B. SHAPE

☐ 4 1 = Tapering
 2 = Strap
 3 = Clavate
 4 = Other (SPECIFY): Fusiform

C. CURVATURE

☐ 3 1 = Erect
 2 = Inclined
 3 = Recurved

D. AWNEDNESS

☐ 4 1 = Awnless
 2 = Apically Awnletted
 3 = Awnletted
 4 = Awned

12. GLUMES (at Maturity):

A. COLOR

- ☐ 1 = White
☐ 2 = Tan
☐ 3 = Other (SPECIFY): _____

B. SHOULDER

- ☐ 2 1 = Wanting 2 = Oblique
☐ 3 = Rounded 4 = Square
☐ 5 = Elevated 6 = Apiculate
☐ 7 = Other (SPECIFY): _____

C. SHOULDER WIDTH

- ☐ 1 1 = Narrow
☐ 2 = Medium
☐ 3 = Wide

D. BEAK

- ☐ 2 1 = Obtuse
☐ 2 = Acute
☐ 3 = Acuminate

E. BEAK WIDTH

- ☐ 2 1 = Narrow
☐ 2 = Medium
☐ 3 = Wide

F. GLUME LENGTH

- ☐ 2 1 = Short (ca. 7mm)
☐ 2 = Medium (ca. 8mm)
☐ 3 = Long (ca. 9mm)

G. WIDTH

- ☐ 2 1 = Narrow (ca. 3mm)
☐ 2 = Medium (ca. 3.5mm)
☐ 3 = Wide (ca. 4mm)

13. SEED

A. SHAPE

- ☐ 1 1 = Ovate
☐ 2 = Oval
☐ 3 = Elliptical

B. CHEEK

- ☐ 1 1 = Rounded
☐ 2 = Angular

C. BRUSH

- ☐ 2 1 = Short
☐ 2 = Medium
☐ 3 = Long

- ☐ 1 1 = Not Collared
☐ 2 = Collared

D. CREASE

- ☐ 1 1 = Width 60% or less of Kernel
☐ 2 = Width 80% or less of Kernel
☐ 3 = Width Nearly as Wide as Kernel

- ☐ 2 1 = Depth 20% or less of Kernel
☐ 2 = Depth 35% or less of Kernel
☐ 3 = Depth 50% or less of Kernel

E. COLOR

- ☐ 3 1 = White
☐ 2 = Amber
☐ 3 = Red
☐ 4 = Other (SPECIFY): _____

F. TEXTURE

- ☐ 2 1 = Hard
☐ 2 = Soft
☐ 3 = Other (SPECIFY): _____

G. PHENOL REACTION (see instructions):

- ☐ ? 1 = Ivory 4 = Dark Brown
☐ 2 = Fawn 5 = Black
☐ 3 = Light Brown

H. SEED WEIGHT

- ☐ 2 ☐ 8 g/1000 seed (Whole number only)

I. GERM SIZE

- ☐ 1 1 = Small
☐ 2 = Midsize
☐ 3 = Large

14. Disease : (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

<input type="checkbox"/> 0 Stem Rust (<i>Puccinia graminis</i> f. sp. <i>tritici</i>)	<input type="checkbox"/> 3 Leaf Rust (<i>Puccinia recondita</i> f. sp. <i>tritici</i>)
<input type="checkbox"/> 2 Stripe Rust (<i>Puccinia striiformis</i>)	<input type="checkbox"/> 0 Loose Smut (<i>Ustilago tritici</i>)
<input type="checkbox"/> 0 Tan Spot (<i>Pyrenophora tritici-repentis</i>)	<input type="checkbox"/> 0 Flag Smut (<i>Urocystis agropyri</i>)
<input type="checkbox"/> 0 Halo Spot (<i>Selenophoma donacis</i>)	<input type="checkbox"/> 0 Common Bunt (<i>Tilletia tritici</i> or <i>T. laevis</i>)
<input type="checkbox"/> 0 <i>Septoria nodorum</i> (Glume Blotch)	<input type="checkbox"/> 0 Dwarf Bunt (<i>Tilletia controversa</i>)
<input type="checkbox"/> 0 <i>Septoria avenae</i> (Speckled Leaf Disease)	<input type="checkbox"/> 0 Karnal Bunt (<i>Tilletia indica</i>)
<input type="checkbox"/> 3 <i>Septoria tritici</i> (Speckled Leaf Blotch)	<input type="checkbox"/> 1 Powdery Mildew (<i>Erysiphe graminis</i> f. sp. <i>tritici</i>)
<input type="checkbox"/> 1 Scab (<i>Fusarium</i> spp.)	<input type="checkbox"/> 0 "Snow Molds"
<input type="checkbox"/> 0 "Black Point" (Kernel Smudge)	<input type="checkbox"/> 0 Common Root Rot (<i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.)
<input type="checkbox"/> 0 Barley Yellow Dwarf Virus (BYDV)	<input type="checkbox"/> 0 Rhizoctonia Root Rot (<i>Rhizoctonia solani</i>)
<input type="checkbox"/> 2 Soilborne Mosaic Virus (SBMV)	<input type="checkbox"/> 0 Black Chaff (<i>Xanthomonas campestris</i> pv. <i>translucens</i>)
<input type="checkbox"/> 2 Wheat Yellow (Spindle Streak) Mosaic Virus	<input type="checkbox"/> 0 Bacterial Leaf Blight (<i>Pseudomonas syringae</i> pv. <i>syringae</i>)
<input type="checkbox"/> 0 Wheat Streak Mosaic Virus (WSMV)	<input type="checkbox"/> 0 Other (SPECIFY) _____
<input type="checkbox"/> Other (SPECIFY) _____	<input type="checkbox"/> Other (SPECIFY) _____
<input type="checkbox"/> Other (SPECIFY) _____	<input type="checkbox"/> Other (SPECIFY) _____
<input type="checkbox"/> Other (SPECIFY) _____	<input type="checkbox"/> Other (SPECIFY) _____

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

<input type="checkbox"/> 1 Hessian Fly (<i>Mayetiola destructor</i>) Some resistance to biotype C	<input type="checkbox"/> Other (SPECIFY) _____
<input type="checkbox"/> 0 Stem Sawfly (<i>Cephus</i> spp.)	<input type="checkbox"/> Other (SPECIFY) _____
<input type="checkbox"/> 0 Cereal Leaf Beetle (<i>Oulema melanopa</i>)	<input type="checkbox"/> Other (SPECIFY) _____
<input type="checkbox"/> 0 Russian Aphid (<i>Diuraphis noxia</i>)	<input type="checkbox"/> Other (SPECIFY) _____

15. INSECT: *Continued* (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

☒ Greenbug (*Schizaphis graminum*)

☐ Other (SPECIFY) _____

☒ Aphids

☐ Other (SPECIFY) _____

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS

EXHIBIT D - MILLING AND BAKING DATA 2004 000 13

Uniform Southern Soft Red Winter Wheat Nursery 2000-01

ADVANCED NURSERY EVALUATION FOR SOFT WHEAT MILLING AND BAKING QUALITY

STD = AVG. OF TWO MASON ENTRIES

LAB ENTRY NO.		MILLING QUALITY SCORE			BAKING QUALITY SCORE		
		REGION 1	REGION 2	MEAN	REGION 1	REGION 2	MEAN
1	Coker 9835	105.5	102.6	104.0	97.8	95.7	96.7
2	Coker 9663	95.7	91.9	93.8	92.0	85.9	89.0
3	Mason	100.6	99.4	100.0	96.3	103.8	100.0
4	AGS2000	105.9	101.7	103.8	101.0	98.2	99.6
5	S9412192	84.3	86.5	85.4	45.9	55.8	50.8
6	LA90518PB43-3-1-4	105.0	101.9	103.5	93.3	102.2	97.7
7	LA90185G3-1-3-4-2	100.0	100.9	100.4	81.2	97.9	89.6
8	VA98W-593	96.2	92.9	94.5	82.0	75.1	78.6
9	NC96-13155	102.5	100.2	101.4	101.3	99.3	100.3
10	NC96-13965	105.8	102.8	104.3	107.1	102.9	105.0
11	B950943	98.1	96.9	97.5	95.5	90.4	93.0
12	TX96D1320	95.2	93.7	94.5	89.0	90.0	89.5
13	TX97D6737	103.2	100.1	101.6	105.0	97.0	101.0
14	TX91-57	93.6	88.9	91.2	82.3	65.4	73.9
15	AR839-27-1-3	103.4	101.2	102.3	98.6	91.9	95.2
16	AR839-25-8-2	102.6	98.0	100.3	97.9	87.2	92.5
17	AR-LA85411	103.5	101.8	102.6	96.3	102.1	99.2
18	LA9397D5-3-3	102.2	101.6	101.9	106.3	102.5	104.4
19	TX98D2106	90.1	91.4	90.8	74.2	81.5	77.8
20	GF90524E1	95.3	92.1	93.7	96.3	91.7	94.0
21	GF92485E15	98.4	97.8	98.1	85.9	89.3	87.6
22	GF921221E16	100.8	95.1	97.9	90.5	98.7	94.6
23	NC96-13156	102.2	99.9	101.0	98.3	98.8	98.6
24	AW-D97-6075	92.7	94.2	93.4	85.9	99.7	92.8
25	AW-D97*6940	101.2	97.4	99.3	84.4	99.6	92.0
26	AW-D97*6961	92.8	93.4	93.1	91.4	99.8	95.6
27	AW-D97-6740	104.8	102.9	103.9	93.9	103.5	98.7
28	VA98W-591	99.4	97.8	98.6	98.5	95.7	97.1
29	VA99W-200	101.4	103.0	102.2	108.0	101.6	104.8
30	VA99W-169	100.3	101.8	101.0	78.2	96.6	87.4
31	TX97-167	102.5	103.3	102.9	79.1	95.8	87.5
32	SC952746	95.5	94.0	94.8	49.7	36.9	43.3
33	SC960057	102.2	99.8	101.0	103.3	102.0	102.7
34	B960208	99.8	97.4	98.6	97.3	97.5	97.4
35	B960457	103.8	103.2	103.5	80.9	97.2	89.0
36	B961378	100.2	97.5	98.9	102.0	95.7	98.9
37	G09088	100.3	102.4	101.3	100.4	101.0	100.7
38	G09091	105.7	104.6	105.1	106.4	98.2	102.3
39	G09080	103.2	103.8	103.5	105.4	97.9	101.6
40	G09138	99.8	100.1	99.9	98.4	99.2	98.8
41	F/G921188E43	97.1	95.5	96.3	63.4	83.8	73.6
42	MDV71-19	102.6	99.4	101.0	84.6	94.0	89.3
43	MDV26-30	93.9	92.8	93.4	77.2	82.3	79.7
	MINIMUM	84.3	86.5	85.4	45.9	36.9	43.3
	MAXIMUM	105.9	104.6	105.1	108.0	103.8	105.0
	MEAN	99.7	98.2	99.0	90.7	92.6	91.7

200400013

ADVANCED NURSERY EVALUATION FOR SOFT WHEAT MILLING AND BAKING QUALITY

STD = #2502, AGS2000

LAB NO.			MILLING QUALITY SCORE		BAKING QUALITY SCORE		COMBINED QUALITY SCORE		MICRO T.W. LB/BU	SOFT. EQUIV. %
		STANDARD	100.0	A	100.0	A	100.0	A	61.4	59.0
2501	1	Coker 9663	86.6	D	97.0	B	86.6	D	59.6 *	54.5 *
2502	2	AGS 2000	100.0	A	99.9	A	99.9	A	61.4	59.0
2503	3	USG 3209	82.5	E	78.3	F	78.3	F	60.4	55.5 *
2504	4	Pioneer 26R61	86.8	D	94.0	C	86.8	D	61.9	55.3 *
2505	5	VA 98W-593	86.3	D	87.2	D	86.3	D	62.4	54.8 *
2506	6	AR 839-25-8-2	93.6	C	102.2	A	93.6	C	60.4	54.8 *
2507	7	AR-LA 85411	92.6	C	105.9	A	92.6	C	61.2	57.7
2508	8	TX 98D2106	76.5	F	81.8	E	76.5	F	60.6	49.7 Q
2509	9	G/F 92485E15	88.2	D	91.5	C	88.2	D	61.8	56.0
2510	10	VA 98W-591	87.8	D	93.7	C	87.8	D	61.9	58.7
2511	11	VA 99W-200	89.9	D	107.1	A	89.9	D	61.1	58.9
2512	12	TX 97-167	89.0	D	95.2	B	89.0	D	60.8	60.2
2513	13	SC 952746	87.1	D	30.7	F	30.7	F	61.1	42.0 Q
2514	14	SC 960057	88.4	D	101.4	A	88.4	D	58.5 Q	53.7 *
2515	15	MDV 71-19	89.8	D	98.1	B	89.8	D	60.6	60.3
2516	16	G 09139	86.6	D	99.8	B	86.6	D	60.0 *	58.2
2517	17	G 96330	80.9	E	104.5	A	80.9	E	59.9 *	55.8 *
2518	18	G 97066	86.9	D	104.9	A	86.9	D	61.4	56.3
2519	19	TX 98D2577	85.9	D	105.4	A	85.9	D	60.3	56.7
2520	20	TX 99D4709	72.8	F	74.3	F	72.8	F	59.5 *	54.4 *
2521	21	AW D98*9762	91.7	C	106.1	A	91.7	C	59.5 *	60.3
2522	22	AW D98*9770	92.0	C	107.5	A	92.0	C	60.5	59.0
2523	23	AW D98*9764	89.4	D	106.4	A	89.4	D	59.2 *	57.8
2524	24	AW D98-9213	90.3	C	108.3	A	90.3	C	60.3	59.8
2525	25	G/F 931241E16	90.2	C	108.6	A	90.2	C	61.5	61.6
2526	26	G/F 931463E27	85.7	D	106.7	A	85.7	D	60.1 *	58.1
2527	27	G/F 93052E42	87.3	D	106.7	A	87.3	D	59.7 *	58.1
2528	28	F/G 931470E62	87.9	D	104.5	A	87.9	D	61.6	55.8
2529	29	F/G 931587E53	84.3	E	93.8	C	84.3	E	59.8 *	57.7
2530	30	F/G 931233E17	88.1	D	105.8	A	88.1	D	61.6	57.2
2531	31	B 961416	86.2	D	107.1	A	86.2	D	60.7	58.6
2532	32	B 970205	91.6	C	99.0	B	91.6	C	61.7	59.6
2533	33	B 971155	80.5	E	97.9	B	80.5	E	60.1 *	58.7
2534	34	LA 94242-D4-2	83.5	E	88.8	D	83.5	E	61.3	51.1 Q
2535	35	LA 9397D5-2-2	89.6	D	108.0	A	89.6	D	59.6 *	59.5
2536	36	LA 9354D9-3-1	84.8	E	100.1	A	84.8	E	59.7 *	57.2
2537	37	TN X-01-1	95.2	B	99.5	B	95.2	B	59.9 *	64.3
2538	38	AR 910-9-1	93.3	C	106.1	A	93.3	C	60.5	57.5
2539	39	NC 98-26143	90.0	C	108.4	A	90.0	C	60.1 *	59.9
2540	40	NC 98-26192	91.2	C	108.5	A	91.2	C	62.0	60.1

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200400013

ADVANCED NURSERY EVALUATION FOR SOFT WHEAT MILLING AND BAKING QUALITY

STD = #2502, AGS2000

LAB NO.			IFLOUR (YIELD %		FLOUR PROT. %	MICRO AWRC %	COOKIE DIAM. CM.	TOP GR.	LACTIC ACID RET'N
		STANDARD	74.1		9.74	59	17.31	3	102.4
2501	1	Coker 9663	71.5	Q	9.15	56.725	17.25	4	111.6
2502	2	AGS 2000	74.1		9.74	59.035	17.31	3	102.5
2503	3	USG 3209	70.2	Q	9.48	62.693 Q	16.88 *	3	108.4
2504	4	Pioneer 26R61	71.2	Q	10.48	57.704	17.08	4	109.8
2505	5	VA 98W-593	71.1	Q	9.07	60.767 *	17.10	3	121.4
2506	6	AR 839-25-8-2	73.3	*	9.71	57.54	17.48	3	110.8
2507	7	AR-LA 85411	72.4	Q	9.50	58.14	17.61	4	125.1
2508	8	TX 98D2106	69.6	Q	11.06	57.396	16.76 Q	3	103.9
2509	9	G/F 92485E15	71.5	Q	10.30	59.465	17.10	2	107.4
2510	10	VA 98W-591	70.9	Q	9.49	60.297	17.18	4	121.5
2511	11	VA 99W-200	71.5	Q	8.94	58.097	18.11	5	119.1
2512	12	TX 97-167	71.1	Q	10.00	60.702 *	17.23	2	134.0
2513	13	SC 952746	73.6		9.29	65.205 Q	15.56 Q	2	99.8
2514	14	SC 960057	72.3	Q	10.02	57.135	17.49	4	104.4
2515	15	MDV 71-19	71.3	Q	10.06	62.301 Q	17.70	4	101.6
2516	16	G 09139	70.9	Q	10.09	56.832	17.22	3	124.6
2517	17	G 96330	69.8	Q	9.52	56.984	17.55	3	118.6
2518	18	G 97066	71.1	Q	9.26	56.541	17.60	4	110.6
2519	19	TX 98D2577	70.9	Q	10.11	56.572	17.73	4	122.9
2520	20	TX 99D4709	67.9	Q	11.03	58.533	16.27 Q	2	136.5
2521	21	AW D98*9762	71.9	Q	9.19	58.645	17.49	4	128.4
2522	22	AW D98*9770	72.1	Q	9.26	57.046	17.54	2	137.7
2523	23	AW D98*9764	71.8	Q	9.34	56.545	17.78	5	120.8
2524	24	AW D98-9213	71.6	Q	9.09	55.921	18.40	6	118.9
2525	25	G/F 931241E16	71.1	Q	9.00	58.531	17.61	4	119.1
2526	26	G/F 931463E27	70.6	Q	9.11	55.528	18.03	5	105.4
2527	27	G/F 93052E42	71.1	Q	9.35	55.27	18.46	5	103.9
2528	28	F/G 931470E62	71.4	Q	9.55	54.358	17.73	4	111.7
2529	29	F/G 931587E53	70.4	Q	9.97	62.272 Q	17.45	3	96.9
2530	30	F/G 931233E17	71.2	Q	8.89	57.007	17.77	3	112.5
2531	31	B 961416	70.6	Q	9.86	57.967	17.96	4	100.0
2532	32	B 970205	71.8	Q	8.48	61.689 *	17.76	4	107.6
2533	33	B 971155	69.2	Q	10.04	60.789 *	17.43	2	98.0
2534	34	LA 94242-D4-2	71.1	Q	10.71	59.085	17.15	1	98.4
2535	35	LA 9397D5-2-2	71.5	Q	9.72	54.281	18.11	4	120.2
2536	36	LA 9354D9-3-1	70.6	Q	10.21	59.883	17.49	2	95.6
2537	37	TN X-01-1	72.1	Q	8.62	62.238 *	17.74	3	105.3
2538	38	AR 910-9-1	72.7	*	9.39	56.815	18.01	5	111.7
2539	39	NC 98-26143	71.5	Q	9.37	57.19	17.90	5	103.6
2540	40	NC 98-26192	71.6	Q	10.08	57.086	17.71	2	109.0

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) University of Arkansas, Agricultural Experiment Station	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER AR 839-25-8-2	3. VARIETY NAME AR 839
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) Agricultural, Food and Life Sciences Building, Room 219 Fayetteville, AR 72701	5. TELEPHONE (Include area code) (479) 575-4750	6. FAX (Include area code) (479) 575-2410
7. PVPO NUMBER		2004 000 13

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain. ☒ YES ☐ NO9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☒ YES ☐ NO10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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